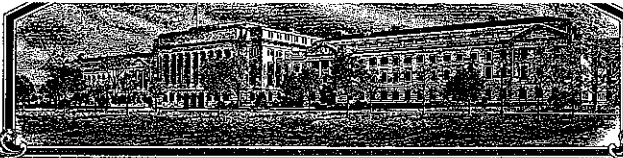


No.

200400155



# THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

## California Planting Cotton Seed Distributors

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Solana'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this twenty-fourth day of March, in the year two thousand and five.

Attest:

*BE m3*  
Commissioner  
Plant Variety Protection Office  
Agricultural Marketing Service

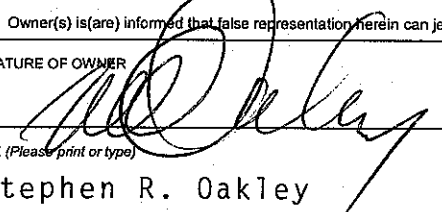
*W. L. Johnson*  
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE  
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE  
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER  California Planting Cotton Seed Distributors		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME  M611		3. VARIETY NAME  'SOLANA' PER EMAIL 5/28/04 LAL	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)  PO Box 80357 Bakersfield, CA 93380.0357		5. TELEPHONE (include area code)  (661) 399-1400		FOR OFFICIAL USE ONLY PVPO NUMBER 200400155	
		6. FAX (include area code)  (661) 399-3169			
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.)  Corporation		8. IF INCORPORATED, GIVE STATE OF INCORPORATION  California		9. DATE OF INCORPORATION  May 13, 1936	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers)  Stephen R. Oakley 30597 Jack Avenue Shafter, CA 93263				FILING AND EXAMINATION FEES: \$ 3652.00 DATE 3/11/2004 CERTIFICATION FEE: \$ 432.00 DATE 11/2/04	
11. TELEPHONE (include area code)  (661) 746-3366		12. FAX (include area code)  (661) 746-6905		13. E-MAIL  sroakley@cpcsd.com	
14. CROP KIND (Common Name)  cotton		15. GENUS AND SPECIES NAME OF CROP  Gossypium hirsutum L.		16. FAMILY NAME (Botanical)  Malvaceae	
17. IS THE VARIETY A FIRST GENERATION HYBRID?  <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)			
19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? See Section 83(a) of the Plant Variety Protection Act <input checked="" type="checkbox"/> YES (If "yes", answer items 20 and 21 below) <input type="checkbox"/> NO (If "no", go to item 22)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED			
21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)		22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)			
23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)		24. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.  The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.  Owner(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF OWNER 		SIGNATURE OF OWNER			
NAME (Please print or type)  Stephen R. Oakley		NAME (Please print or type)			
CAPACITY OR TITLE  Vice President, Director of R&D		DATE  Feb 29, 2004		CAPACITY OR TITLE  DATE	

**GENERAL:** To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

**Plant Variety Protection Office**

**Telephone: (301) 504-5518**

**FAX: (301) 504-5291**

**Homepage:** <http://www.ams.usda.gov/science/pvpo/pvp.htm>

**ITEM**

- 18a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method; (2) the details of subsequent stages of selection and multiplication; (3) evidence of uniformity and stability; and (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
- (1) identify these varieties and state all differences objectively;
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
19. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See *Regulations and Rules of Practice, Section 97.103*).
22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
23. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

**21. CONTINUED FROM FRONT** (Please provide a statement as to the limitation and sequence of generations that may be certified.)

**22. CONTINUED FROM FRONT** (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

**23. CONTINUED FROM FRONT** (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

**NOTES:** It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

**To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089. <http://www.ams.usda.gov/lsg/seed.htm>**

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 3.0 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (02-10-2003) designed by the Plant Variety Protection Office with Word 2000. Replaces former versions of ST-470, which are obsolete.

200400155  
REPLACEMENT  
5/6/04 LAW

**Exhibit A. Origin and Breeding History - M611** 'SOLANA' LAW 5/28/04

M611 is a variety of cotton developed from the cross M177 x M225 made in 1993 at the CPCSD Cotton Research and Development Station, Shafter, California. The parents M177 and M225 are selections made for fiber quality and Verticillium-wilt tolerance in the SJV from the commercial cotton varieties DP 5816 and DP 5690, respectively, developed and released by the Delta and Pine Land Company, Scott, Mississippi. DP 5816 was developed from the cross DP Acala 90 x DP 69, while DP 5690 was developed from DP Acala 90 x DP 80. The lines were developed as follows: DP Acala 90 came from the cross DP 6516 x DP 6583, DP 80 was derived from the cross [DP 16 x (DP 5540 x DP Smooth Leaf)], and DP 69 is thought to be a selection from DP 61. The backgrounds of all these lines are detailed by Calhoun, et al. (Calhoun, D.S., D.T. Bowman, and O.L. May, 1994, Pedigree of Upland and Pima Cotton Cultivars Released Between 1970 and 1990, MAFES Bulletin 1017, Mississippi State University, MS 39762).

Details of Selection

Seed from the cross M177 x M225 were planted in the 1993-94 Tecoman winter nurseries as an F<sub>1</sub> population and subsequently planted in 1994 as an F<sub>2</sub> row at a CPCSD Upland breeding nursery in Mexico, which was bulk harvested. The F<sub>3</sub> and F<sub>4</sub> seed were bulk harvested and these populations were selected on the basis of heat tolerance, fiber quality and yield potential. A pedigree selection procedure followed in the F<sub>5</sub> and F<sub>6</sub> (plant to row basis) as individual plants were each selected on the basis of agronomic characteristics, yield potential, and fiber properties. In 1998 F<sub>7</sub> seed from the F<sub>6</sub> row M611 was bulk harvested and entered into the 1999 CPCSD Upland Lines Test. This line designated M611 continued testing in the 2000 to 2003 CPCSD testing programs.

Variants and Stability

CPCSD M611 was evaluated for five generations and no variants have been observed. The performance of M611 has been uniform and stable.

Population Size for Selection

Population	Approximate Number of Individuals
F <sub>1</sub>	180
F <sub>2</sub> - F <sub>4</sub>	2000
F <sub>5</sub> - F <sub>6</sub>	60

**Exhibit A. Origin and Breeding History - M611**

200400155  
SOLANA  
LAH  
5/28/04  
Generation

<u>Year</u>	<u>Event</u>	<u>Generation</u>
1993	Cross: M177 x M225 DP Acala 90 x DP 69 = DP 5816 selection = M177 DP Acala 90 x DP 80 = DP 5690 selection = M225	
1993-94	Increased in Tecoman Winter Nursery as F1-177	F <sub>1</sub>
1994	F1-177 planted as row M308	F <sub>2</sub>
1995	Row M308 planted as row M367	F <sub>3</sub>
1996	Row M367 planted as row M443	F <sub>4</sub>
1997	Plant selection M443-4 planted as row M517	F <sub>5</sub>
1998	Plant selection M517-6 planted as row M611, and row M611 was harvested as a progeny row	F <sub>6</sub>
1999-2003	M611 tested in CPCSD Upland testing program	

200400155

REPLACEMENT 5/6/04 LAL  
5128104**Exhibit B. Statement of Distinctness - M611 'SOLANA'**

M611 was compared to cotton varieties SureGrow 747 and Stoneville 474 in fifteen test locations over three years. M611 is most similar to Suregrow 747. The San Joaquin Valley Cotton Standard, Acala Maxxa, was added to the comparisons in Exhibit C.

M611 is a novel cotton variety and is significantly different from Suregrow 747 because its significantly longer fiber length and increased fiber strength (Exhibit B Table 1).

**Exhibit B Table 1. 2001 CPCSD Upland AST -  
Summary of California Locations**

Variety	2.5% span length	Fiber Strength T1
	(in)	(g/tex)
Stoneville 474	1.108	19.0
SureGrow 747	1.107	18.2
M611	1.143	21.3
LSD.05	0.021	1.3
CV	1.37	4.5

200400155

SOLANA  
5/28/04

## 2001 Upland AST - M611 PVP Data

**Location: Shafter**

Variety	2.5% span length	T1
	(in)	(g/tex)
STV 474	1.143	19.3
SG 747	1.145	17.9
M611	1.173	22.4
CV	1.529	3.4
LSD	0.032	1.2

**Location: Strathmore**

Variety	2.5% span length	T1
	(in)	(g/tex)
STV 474	1.110	19.2
SG 747	1.130	19.3
M611	1.133	19.8
CV	1.180	5.3
LSD	0.024	1.9

**Location: Riverdale**

Variety	2.5% span length	T1
	(in)	(g/tex)
STV 474	1.070	18.6
SG 747	1.045	17.5
M611	1.125	21.6
CV	1.379	4.9
LSD	0.028	1.8

**Across California locations 2001**

Variety	2.5% span length	T1
	(in)	(g/tex)
VARIETY	FL25	T1
STV 474	1.108	19.0
SG 747	1.107	18.2
M611	1.143	21.3
CV	1.372	4.5
LSD	0.021	1.3

6

U.S. DEPARTMENT OF AGRICULTURE  
PLANT VARIETY PROTECTION OFFICE, AMS, USDA  
NATIONAL AGRICULTURAL LIBRARY Bldg., Rm. 400  
10301 BALTIMORE Blvd.  
BELTSVILLE, MD 20705

OBJECTIVE DESCRIPTION OF VARIETY  
COTTON (*Gossypium* spp.)

NAME OF APPLICANT(S) <b>California Planting Cotton Seed Distributors</b>	TEMPORARY DESIGNATION <b>M611</b>	VARIETY NAME <b>ISOLANA</b> <sup>2nd</sup> <sub>6728104</sub>
ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code) <b>PO Box 80357</b> <b>Bakersfield, CA 93380-0357</b>		FOR OFFICIAL USE ONLY PVPO NUMBER <b>200400155</b>

Place the appropriate data that describes the varietal characteristic of this variety in the space provided. Characteristics described, including numerical measurements, should represent those that are typical for the variety. Royal Horticultural Society or any recognized color fan may be used to determine plant colors. Characters marked with an asterisk \* indicate necessary characters to be measured.

SPECIFIC VARIETIES USED FOR COMPARISON AS CHECK VARIETIES IN THIS APPLICATION: Use standard regional check varieties which are adapted to your area. One of the comparison varieties must be the most similar variety used in Exhibit B.

Variety 1. SUREGROW 747      Variety 2. ACALA MAXXA      Variety 3.                     

\*1. SPECIES:

☒ *G. hirsutum* L.

☐ *G. barbadense* L.

\*2. AREA(S) OF ADAPTATION: (A=Adapted, NA= Not Adapted, NT= Not Tested)

<input type="checkbox"/> Eastern	<input type="checkbox"/> Delta	<input type="checkbox"/> Central	<input type="checkbox"/> Blacklands
<input type="checkbox"/> Plains	<input type="checkbox"/> Western	<input type="checkbox"/> Arizona	<input checked="" type="checkbox"/> San Joaquin
<input type="checkbox"/> Other (Specify): <u>                    </u>			

3. GENERAL: Characteristics which are known to be variable but are still useful for a meaningful description of the variety.

	<u>M611</u> Application Variety	<u>SG747</u> Comparison Variety 1	<u>Maxxa</u> Comparison Variety 2	<u>                    </u> Comparison Variety 3
<b>Plant Habit:</b> Spreading, Intermediate, Compact	<u>I</u>	<u>I</u>	<u>I</u>	
<b>Foliage:</b> Sparse, Intermediate, Dense	<u>I</u>	<u>I</u>	<u>I</u>	
<b>Stem Lodging:</b> Lodging, Intermediate, Erect	<u>I</u>	<u>I</u>	<u>I</u>	
<b>Fruiting Branch:</b> Clustered, Short, Normal	<u>N</u>	<u>N</u>	<u>N</u>	
<b>Growth:</b> Determinate, Intermediate, Indeterminate	<u>Intermed</u>	<u>Intermed</u>	<u>Intermed</u>	
<b>Leaf Color</b> Greenish yellow, Light green, Medium green, Dark green	<u>MG</u>	<u>LG</u>	<u>DG</u>	

## 3. GENERAL:

M611

'SOLANA'  
Wab  
5/28/04

SG747

Maxxa

**Boll Shape:** Length LESS than  
width, Length EQUAL to width,  
Length MORE than width

More

More

More

**Boll Breadth:** Broadest at base,  
Broadest at middle

Middle

Middle

Middle

## \*4. MATURITY: (Days for 50% Open bolls from sequential harvest dates.)

Days for 50% Open Bolls

140

140

146

## 5. PLANT:

**Cm to 1st Fruiting Branch:**

(from cotyledonary node)

29.7

25.5

25.8

**No. of Nodes to 1st Fruiting****Branch:**

(excluding cotyledonary node)

5.05

4.30

4.1

**Mature Plant Height cm:**

(from cotyledonary node to terminal)

121.3

112.8

110.8

## \*6. LEAF

**Type:** Normal Sub Okra, Okra,

Super Okra

N

N

N

**Pubescence:** Absent, Sparse, Medium,Dense **OR** Trichomes/cm2 (Bottom  
surface excluding veins)

S

M

M

**Nectaries:** Present or Absent

P

P

P

## \*7. STEM PUBESCENCE:

Glabrous, Intermediate, Hairy

I

I

I

## \*8. GLANDS: (Gossypol) Absent, Sparse, Normal, More Than Normal

**Leaf:**

N

N

N

**Stem:**

N

N

N

**Caly% Lobe:** (normal is absent)

A

A

A

## \*9. FLOWER

**Petals:** Cream, Yellow

C

C

C

**Pollen:** Cream, Yellow

C

C

C

**Petal Spot:** Present, Absent

A

A

A

## \*10. SEED

**Seed Index:**

(g/100 seed, fuzzy basis)

9.8

9.9

10.7

**Lint Index:**

(g lint/100 seeds)

7.03

7.81

9.01

## \*11. BOLL

		<b>M611</b> <sup>'SOLANA'</sup> <sub>5/28/04</sub>	<b>SG747</b>	<b>MAXXA</b>	
<b>Lint Percent:</b>					
<u>X</u> Picked	Pulled	39.6	42.5	41.4	
<b>OR</b>					
<b>Gin Turnout:</b>					
<u>X</u> Picked	Stripped	32.4	33.5	33.8	
<b>Number of Seeds per Boll</b>		36	38	33	
<b>Grams Seed per Boll</b>		4.9	5.4	6.2	
<b>Number Locules per Boll</b>		4-5	4-5	4-5	
<b>Boll Type:</b>					
(Stormproof, Storm Resistant, Open)		Open	Open	Open	

## 12. FIBER PROPERTIES

Specify Method (HVI or other): Individual Instruments

* <b>Length:</b> (inches, 2.5% SL)	1.15	1.12	1.18	
* <b>Uniformity:</b> (%)	48.7	48.2	49.9	
* <b>Strength, T1</b> (g/tex) stelometer	22.1	17.5	24.5	
* <b>Elongation, E1</b> (%)	6.13	8.38	7.5	
* <b>Micronaire:</b>	4.01	4.11	3.85	
<b>Fineness</b> (Source _____ )				
<b>Yarn Tenacity:</b> (cN/tex, 27 tex)				
<b>Yarn Strength</b> (lbs. 22's)	137.8	108.4	146.1	

## 13. DISEASES: (NT=Not Tested, S= Susceptible, MS=Moderately Susceptible, MR=Moderately Resistant, R=Resistant)

<u>NT</u> <i>Alternaria macrospora</i>	<u>NT</u> Fusarium Wilt
<u>NT</u> Anthracnose	<u>NT</u> Phymatotrichum Root Rot
<u>NT</u> Ascochyta Blight	<u>NT</u> <i>Pythium</i> (specify species)
<u>NT</u> Bacterial Blight (Race 1)	<u>NT</u> <i>Rhizoctonia solani</i>
<u>NT</u> Bacterial Blight (Race 2)	<u>NT</u> Southwestern Cotton Rust
<u>NT</u> Bacterial Blight ( Race )	<u>NT</u> Thielaviopsis basicola
<u>NT</u> Diplodia Boll Rot	<u>MR</u> Verticillium Wilt
<u>NT</u> Other (specify )	

14. NEMATODES, INSECTS AND PESTS: (NT=Not tested, S=Susceptible, MS= Moderately Susceptible, MR=Moderately Resistant, R= Resistant

<u>NT</u>	Root-Knot Nematode	<u>NT</u>	Reniform Nematode
<u>NT</u>	Boll Weevil	<u>NT</u>	Grasshopper (specify species):
<u>NT</u>	Bollworm	<u>NT</u>	Lygus (specify species):
<u>NT</u>	Cotton Aphid	<u>NT</u>	Pink Bollworm
<u>NT</u>	Cotton Fleahopper	<u>NT</u>	Spider Mite (specify species): _____
<u>NT</u>	Cotton Leafworm	<u>NT</u>	Stink Bug
<u>NT</u>	Cutworm (specify species): _____	<u>NT</u>	Thrips (specify species): _____
<u>NT</u>	Fall Armyworm	<u>NT</u>	Tobacco Bud Worm
<u>NT</u>	Other (specify): _____		

15. COMMENTS: Present any additional information that cannot adequately be described in 1 through 13 which significantly distinguishes your variety.

Exhibit D. Additional Description - M611 'SOLANA' LAL  
5/28/04

Table 2. 2001 CPCSD Upland AST - Summary of Three California Locations

Variety	Seed Cotton Yield (lbs/A)	Lint Yield (lbs/A)	Gin Turn Out (%)	Lint Percent (%)	Seed Percent (%)	Seed Index (g)	Seed Weight (g)	Seeds per Boll	Lint per boll (g)	Lint index (g)	2.5% span length (in)	Unif. index	T1 (g/tex)	E1 (%)	Mic
STV 474	4047	1375	32.9	43.4	56.6	10.0	5.2	29	2.3	7.7	1.108	0.46	19.0	7.9	4.06
SG 747	4113	1384	33.0	42.5	57.5	9.8	5.4	32	2.3	7.3	1.107	0.46	18.2	9.3	4.26
M611	3919	1245	30.6	39.6	60.4	9.8	4.9	30	1.9	6.4	1.143	0.47	21.3	7.1	3.76
LSD.05	463	164	0.9	0.9	0.9	0.5	0.4	2	0.2	0.4	0.021	0.01	1.3	0.6	0.28
CV	9.9	10.0	1.9	1.6	1.1	5.6	7.8	9.9	8.2	5.4	1.4	1.6	4.5	6.0	4.7

Table 3. 2001 CPCSD Upland AST - Summary of Three California and Two Arizona locations

Variety	Seed Cotton Yield (lbs/A)	Lint Yield (lbs/A)	Gin Turn Out (%)	Lint Percent (%)	Seed Percent (%)	Seed Index (g)	Seed Weight (g)	Seeds per Boll	Lint per boll (g)	Lint index (g)	2.5% span length (in)	Unif. index	T1 (g/tex)	E1 (%)	Mic
STV 474	4146	1412	34.5	41.5	57.7	10.4	5.2	29	2.2	7.6	1.108	0.46	19.0	7.7	4.44
SG 747	4202	1432	34.5	41.0	58.0	10.1	5.5	32	2.3	7.3	1.094	0.46	18.8	9.0	4.64
M611	4003	1289	32.2	37.5	61.7	10.2	4.9	30	1.9	6.3	1.148	0.47	21.5	7.0	4.06
LSD.05	433	153	1.2	1.1	1.2	0.4	0.4	2	0.2	0.4	0.029	0.01	1.1	0.5	0.31
CV	11.8	12.7	2.6	2.6	1.6	3.7	6.6	6.0	7.7	4.4	2.1	1.7	4.4	5.5	6.1

Exhibit D. Additional Description - M611 'SOLANA' *WJ*  
5/28/04

Table 4. 2000-2001 CPCSD Upland AST - Summary of Ten California and Arizona locations

Variety	Seed Cotton		Gin		Lint		2.5%		Unif.		T1		E1		Mic	
	Yield	(lbs/A)	Yield	(%)	Percent	index	length	(in)	index	(g/tex)	(g/tex)	(%)	(%)	(%)	(%)	(%)
STV 474	4300	1470	33.0	42.6	7.5	1.112	0.47	18.4	7.6	4.28						
SG 747	4407	1492	33.1	42.0	7.3	1.103	0.47	18.3	8.8	4.46						
M611	4126	1307	31.2	39.7	6.3	1.149	0.48	21.7	6.7	4.04						
LSD.05	296	108	1.0	0.9	0.6	0.021	0.01	1.0	0.4	0.24						
CV	9.6	10.6	2.0	1.7	5.0	1.9	1.9	5.1	6.2	5.8						

Table 5. 2002 CPCSD Upland AST - Summary of Three California and Two Arizona Locations

Variety	CA		AZ		Overall		Gin		Fiber		Unif		HVI Fiber Properties		T1		E1		Mic		Rd		+b	
	Avg	(lbs/A)	Avg	(lbs/A)	Avg	(lbs/A)	Turn	Out	Length	(in)	Ratio	(%)	T1	(g/tex)	(g/tex)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
ST474	1237	1554	1343	1343	1343	1343	33.4	33.4	1.132	83.5	29.9	8.2	4.37	76.2	9.0									
SG747	1215	1585	1338	1338	1338	1338	33.8	33.8	1.131	83.6	28.3	8.7	4.36	77.2	9.1									
M611	1224	1352	1267	1267	1267	1267	31.6	31.6	1.152	84.1	34.3	8.0	4.04	79.1	7.7									
LSD.05	97	122	93	93	93	93	0.8	0.8	0.017	0.6	1.0	0.2	0.25	1.2	0.2									
CV	6.5	4.8	7.4	7.4	7.4	7.4	1.8	1.8	1.4	0.8	3.3	3.4	5.6	1.4	4.1									

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U.S. DEPARTMENT OF AGRICULTURE  
AGRICULTURAL MARKETING SERVICE

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

**EXHIBIT E**  
**STATEMENT OF THE BASIS OF OWNERSHIP**

1. NAME OF APPLICANT(S) California Planting Cotton Seed Distributors	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER M611	3. VARIETY NAME 'SOLANA' <i>WAT 5/28/04</i>
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) PO Box 80357 Bakersfield, CA 93380-0357	5. TELEPHONE (Include area code) (661) 399-1400	6. FAX (Include area code) (661) 399-3169
7. PVPO NUMBER <b>200400155</b>		

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain. ☒ YES ☐ NO9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country. ☒ YES ☐ NO10. Is the applicant the original owner? ☒ YES ☐ NO If no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☐ YES ☐ NO If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☐ YES ☐ NO If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

The applicant is the original breeder and current owner of the variety.

The variety was developed from germplasm and seedstocks owned by the applicant, by individuals employed by the applicant, at facilities owned by the applicant, or through contractual arrangements made by the applicant.

**PLEASE NOTE:**

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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